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8 January 1993

TO: Pam Grubaugh-Littig, Permit Supervisor

FROM: Hugh Klein, Geologist/Hydrologist 

RE: Co-Op PAP, Appendix 7-M (Spring & Seep Inventory) Co-Op Mining Company, Bear Canyon Mine, ACT/015/025, Folder #3, Emery County, Utah

SUMMARY

As per your request, this is a review of Co-Op's submittal regarding Appendix 7-M. The proposal is to incorporate the appendix into the current PAP, so the present review does not directly address the Federal Lease application. This review does address springs and seeps found in and around the Federal Lease that are proposed for monitoring as part of the current PAP.

ANALYSIS

Review of the proposal has resulted in three main concerns. Each concern is very serious, and are as follows:

- 1) On page 7M-11 the text states, "Currently Co-Op expects to reach the south boundary of the [Federal] lease in February 1993. Due to the need to continue mining, Co-Op commits to limiting mining activities to development only until baseline monitoring is complete for FBC-2." In general, the Division requires **two** years of baseline monitoring before issuing a permit. When there is one year of baseline information, the Division may (but does not have to) start reviewing this information. In this case, there is not even one year of baseline information to illustrate seasonal variation in quality and quantity. The specifics of baseline information will be discussed further below, but at the present time, I do not believe mining should be allowed in the lease, even if it is only development.
- 2) In general, baseline water monitoring requirements for the Federal Lease have not been met. The sampling and testing done on the springs does not reflect seasonal variation because it was done in three **different** calendar years and only in two quarters of the year (third and fourth). Monitoring must occur in consecutive quarters so as to show seasonal variation in quality and quantity.
- 3) Finally, there is **no** information regarding the water bearing stratum above and below the coal seam. Information presented in the PHC indicates the water table rises to the north

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making it plausible and probable that as mining proceeds north, large quantities of water would be intercepted. See R645-301-724 for the regulation concerning this issue.

An additional concern is FBC-12. Co-Op does not wish to monitor this point because of an accessibility concern and its location upstream of another point. Despite this, FBC-12 should be included because it is isolated and will provide a true undisturbed reference to BC-1.

RECOMMENDATION

The appendix may be approved for the existing operation, but the comments made above must be addressed for water monitoring requirements associated with the Federal Lease.

c: Ken Wyatt
Tom Munson
Susan White
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